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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/492,602 01/27/00 GRIDLEY

J 29423/207

023460 IM52/0926
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EXAMINER

FISCHER, J

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 09/26/01

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)
	09/492,602	GRIDLEY ET AL.
	Examiner Justin R Fischer	Art Unit 1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 27 January 2000.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-29 is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-29 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6 and 7</u> .	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8, 10-12, 14-20, and 22 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As currently drafted, it is unclear what **structural limitations**, if any, these claims contain to further define the apparatus of claims 1, 6, and 13.

Claim Objections

3. Claims 8, 10-12, 14-20, and 22 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In each instance, applicant has intended to further limit the **apparatus** of independent claims 1, 6, and 13 with **method limitations**, not **structural limitations**. Therefore, the aforementioned claims are objected to since they do not further limit the **structural makeup** of the claimed invention.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6-24, 26, and 29 rejected under 35 U.S.C. 102(b) as being anticipated by Taylor (US 4,096,008). Taylor teaches the use of a retreading apparatus comprising a tire casing mount, a cushion gum applicator, a tread dispenser, and a tread applicator in accordance to the limitations outlined in the claimed invention.

It should be initially noted that this paragraph defines the general apparatus teaching of Taylor with respect to independent claims 1, 6, and 13, with the following paragraphs dedicated to the remaining dependent claims of the apparatus and method. Regarding claim 1, Figure 1 depicts a mounted carcass that is to be rotated by a suitable drive mechanism (Column 3, Lines 21-25), a cushion gum applicator in the form of material roll spindles (Column 3, Lines 10-20), a tread dispenser in the form of a molding apparatus (Column 3, Lines 1-3), and a tread applicator in the form of a pressure wheel or roll (Column 3, Lines 10-12), all of which are integrated into a single machine. With specific respect to claim 6, the reference describes all the claimed limitations, as described in the rejection of claim 1 above. Though the reference does not expressly state the employment of a "rotatable hub" (reference states that a carcass is rotated by a suitable drive mechanism), this structure is an integral component of the described carcass structure and is therefore suggested by this reference. Regarding claim 13, the reference clearly illustrates the use of a tread cutter 16 in Figure 1.

Regarding claims 2 and 7, the reference depicts the use of a lineal measurement device 15 in Figure 1 and describes its function in the specification (Column 3, Lines 37-44).

As per claim 3, the reference depicts a tread cutter 16 configured to cut the tread to a determined length (Column 3, Lines 40-44).

With respect to claim 9, Taylor suggests that the cushion gum is dispensed from a rotatable spindle configuration (Column 3, Lines 15-17).

Regarding claim 21, Taylor describes the use of a pressure roller or applicator roller 9 that constitutes the "tread applicator", as defined in the claimed invention.

As per claims 23 and 29, Taylor outlines a method of retreading a tire comprising (a) mounting of a carcass (tire casing), (b) stretching a length of cushion gum, (c) measuring the circumference of the tire casing, (d) dispensing a length of tread, and (e) applying the length of tread. As stated above, though the reference does not expressly state the employment of a "rotatable hub" (reference states that a carcass is rotated by a suitable drive mechanism), this structure is an integral component of the described carcass structure and is therefore suggested by this reference. Additionally, the combination of application roller 9 and pressure rollers 13 and 14 allow the stretching of the tread and subsequent pressure to be controlled as it is removed from the conveyor track system and adhered to the tire casing.

With respect to claims 24 and 26, the reference states that a lineal measurement device 15 is employed to record the precise circumferential dimensions of the carcass. It should be noted that this measurement necessarily takes into account the thickness of the gum cushion since the tread application is dependent upon the entire circumference, not just the circumference of the tire casing (i.e. carcass). Furthermore, the reference states that said measurement is used to sever the tread strip to the

precise length required to conform to the circumference of the tire (Column 3, Lines 37-44).

As per claims 8, 10-12, 14-20, and 22, applicant has intended to further limit the apparatus of the independent claims with method limitations. As such, it is unclear what structural limitations, if any, these claims contain to further define the apparatus of the independent claims.

Regarding claim 8, it appears that a quantitative relationship between the angular rate of the hub and the circumference of the tire is established. It is unclear if a control connection exists between the hub and the measurement device, or if such a relationship results from an operator being present. Taylor does describe the use of a measurement device to obtain the circumference of the tire casing, with such a device having the capability of either alerting an operator to vary the angular rate or providing a signal to a control assembly.

With respect to claim 10, applicant has suggested a quantitative relationship between a first angular rate (hub) and a second angular rate (gum cushion spindle). In an analogous manner to claim 8 above, it is unclear if a control connection exists between the hub and the gum cushion spindles, or if such a relationship results from an operator being present.

As per claims 11 and 12, the claim, as currently drafted, only requires that the apparatus have the capability of being operated at the suggested control levels. Thus, it is evident that the apparatus described by Taylor can be operated in the claimed

manner, with such a control setting being almost necessary to obtain a good adhesion with the tire casing (tension applied to gum cushion is optimized).

Regarding claim 14, it appears that the apparatus requires the capability to have some form of "operator input" to specify the necessary length of tread. Though Taylor describes an automated process utilizing a measurement device, it is evident that the apparatus is capable of functioning in an alternative manner (i.e. operator input), with such an input being extremely likely in case the automated system is not properly functioning or some additional complications occur.

With respect to claim 15, the claim suggests that the length of tread is based on matching the tread patterns of the first and send ends of the tread. It is unclear if this represents an automated process or such a "matching" is accomplished by means of an operator. In any event, the apparatus of Taylor is capable of functioning in such a manner to provide an aesthetic quality to the tread region of the tire.

As per claim 16, it has been previously noted that the determined length of tread may result from "operator input" or an automated assembly, with the apparatus of Taylor having the capability to function in either manner.

Regarding claim 17, Taylor describes the use of a measurement device that cooperates with the tread cutter to properly sever the length of tread.

With respect to claims 18-20, Taylor has described the use of a lineal measurement device to obtain a scored splice at the two ends of the tread strip. The claims, though, only require that the apparatus have the capability of operating in the claimed manner. Thus, it appears that based on the readings provided by said device,

the stretching and rate of tread application would be necessarily varied to obtain a precise splice of the ends of the tread.

As per claim 22, the claim does not include the structural means utilized to vary the force of the applicator roller. In an analogous manner to the preceding argument, the measurement device has the capability of providing readings that alter the stretching and rate of tread application.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 rejected under 35 U.S.C. 103(a) as obvious over Taylor. As stated above, Taylor describes an apparatus for retreading comprising a tire casing mount, a cushion gum dispenser, a tread dispenser, and a tread applicator, all of which are integrated in to a single machine. Additionally, the reference depicts the use of a flat conveyor system to guide the length of tread into the application assembly region. Though the reference does not expressly state the use of a "curved track", such a configuration would have been obvious to one of ordinary skill in the art at the time of the invention in view of Taylor as described below.

Applicant has stated that a "curved track" eliminates any substantial bending or stretching caused by abrupt changes in the path of travel (Page 9, Lines 2-6). Taylor, on the other hand, depicts a flat conveying system or track that guides the length of

tread. It is evident that the track outlined by Taylor does not contain any abrupt changes in the path of travel and thus does not contribute to any additional bending or stretching. Additionally, the specific "curved track" described by applicant is an obvious variant over the track illustrated by Taylor and would be beneficial if the point of application needed to be different from the level at which the tread was dispensed due to the design of the additional apparatus. Thus, Taylor describes a track system that operates as an equivalent alternative to the claimed track system in that it eliminates substantial bending and stretching, said claimed track system being an obvious variant over the track system defined by Taylor.

8. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Currie (US 5,882,457), Okuyama (US 4,804,426), and Miyamoto (US 5,292,398). Taylor, as previously mentioned, outlines the general retreading apparatus comprising a tire casing mount, a cushion gum applicator, a tread dispenser, and a tread applicator. However, the reference is silent with respect to the use of a first and second clamp to engage the length of tread. In any event, clamping mechanisms are conventionally used to (a) align a length of tread, (b) monitor the position of a length of tread, and (c) provide any additional stretching or bending through application of pressure. For example, Currie describes the use of a single gripping or clamping mechanism that initially engages the front portion of the tread and subsequently engages the rear portion of the tread as the front portion is laid upon the drum. Additionally, Okuyama and Miyamoto suggest that both front and rear clamping mechanisms are conventionally employed, independent of one another. Thus, it would

have been obvious to one of ordinary skill in the art at the time of the invention to employ a first and second clamp as set forth below.

As stated above, clamping mechanisms are conventionally employed to facilitate the dispensing of a length of tread onto a rotating drum. Currie suggests the use of a single clamping mechanism to engage both the front and rear portion (mechanism disengages from front portion as it begins to adhere to casing). Thus, it is clear that the reference is concerned with the clamping of both the front and rear portions. However, the conventional use of independent front and rear clamping mechanisms is evident by Okuyama (Column 1, Lines 30-45) and Miyamoto (Abstract). Therefore, one of ordinary skill in the art at the time of the invention would have readily appreciated the clamping of a front and rear portion of a length of tread by a single mechanism or two, independent mechanisms, such that either method provides the aforementioned benefits.

9. Claims 25, 27, and 28 rejected under 35 U.S.C. 103(a) as being obvious over Taylor in view of Meyer (US 5,458,727). As stated above, Taylor describes a method of retreading a tire in accordance to the limitations outlined in claim 23. However, Taylor does not expressly state the relationship between the angular rate of the mounting structure and the circumference of the tire or the specific cutting methodology employed in the claimed invention. In any event, these limitations are obvious variants, with the cutting methodology being expressly suggested by Meyer, over conventional techniques and would have been readily appreciated by one of ordinary skill in the art at the time of the invention as set forth below.

Regarding claim 25, the reference does not explicitly state that the mounting apparatus or hub is rotated based on the circumference of the tire. However, this technique is conventionally used in many retread methods. For example, many retread applications employ the use of a microprocessor that indexes several tire dimensions (i.e. circumference) and appropriately submits a signal that dictates the angular velocity of the mounting structure. Thus, one of ordinary skill in the art at the time of the invention would have readily appreciated the use of the tire circumference to vary the angular rate of the mounting structure.

As per claim 27, conventional retreading methods include the use of either an automated cutting assembly or an operator-controlled assembly. For example, Meyer explicitly states the use of an operator or an automated assembly as equivalent alternatives for a variety of tasks, including tread application and subsequent cutting (Column 10, Lines 61-67).

With respect to claim 28, it has been previously mentioned that operator-controlled and automated cutting assemblies are conventionally employed in retreading methods. Thus, it is evident that a tread strip could be severed in a manner that matches the tread pattern in the beginning region and the end region, such a technique being used to provide a desired aesthetic quality to the tread region of the tire.

Conclusion

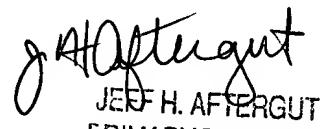
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is (703) 605-4397. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Justin Fischer

September 21, 2001


JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300